

CLAIMS

1. A catalyst comprising particles of one or more catalytic metals supported on a porous carrier made of one or more metal oxides, wherein the porous carrier is made of an oxide containing a rare earth oxide, and that
5 the catalytic metal particles are made of one or more transition metals or transition metal oxides having 10 to 50000 atoms.
2. The catalyst according to claim 1, wherein the catalytic metal particles are supported as a single layer or multiple layers having a thickness of 1 to 5
10 atoms in an oxidizing atmosphere.
3. The catalyst according to claim 2, wherein at least one kind of the catalytic metal particles on the carrier is made of a complex oxide of a rare earth element and a transition metal element.
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4. A catalyst formed by reducing the catalyst according to claim 2 or 3, the catalyst comprising granular catalytic metal particles having a particle size of 1 to 10 nm supported on a porous carrier.
- 20 5. The catalyst according to any one of claims 1 to 4, wherein the porous carrier contains 15 to 100 wt% rare earth oxide.
6. The catalyst according to any one of claims 1 to 5, wherein the porous carrier has a specific surface area of 10 to 250 m²/g for 1 wt% of an amount
25 of a catalytic metal supported relative to the whole catalyst.

7. The catalyst according to any one of claims 1 to 6, wherein the one or more transition metals are at least any of platinum, palladium, rhodium, ruthenium, silver, gold and iridium.
- 5 8. The catalyst according to any one of claims 1 to 7, wherein the oxide constituting the porous carrier is any of ceria, ceria-zirconia, ceria-zirconia-yttria or ceria-lanthanum-zirconia.